

Georgia Tech's Research Option

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What is Research Option?

- Challenging research program designed for students who wish to excel beyond the typical undergraduate degree
- Longer-term research opportunity (3+ sem)
- Culminates in a research thesis

Why complete Research Option?

- True preparation for graduate school
- More intensive research experience
- Additional opportunities to present work or submit to professional journals
- Exposure to “cycles” of research
 - Idea generation
 - Proposal
 - Actual project
 - Final paper, publication, presentation

Minimum Requirements

- Proposal (specific content)
- Nine hours of research
 - Credit or pay
 - Must be on transcript
 - 6 of 9 hours on same project (thesis project)
 - Over 2, preferably 3 semesters
- LCC 4701: Undergraduate Research Proposal Writing (1-hour)
- LCC 4702: Undergraduate Research Thesis Writing (1-hour)
- Thesis/Major Paper

Inter and Other-Disciplinary Plans

- Students may earn a Research Option in any school that offers it, with the approval of the school and notification of the student’s home school
- True interdisciplinary plans must be approved by the faculty Undergraduate Research Advisory Group (URAG)
- Students still complete all the regular requirements for their degree
- “Research Option in <school/major>” appears on transcript

Student Feedback

“I am participating in the Research Option because I thought that it was impressive and would give me a glimpse of being a graduate student” – *Tyler Weston, CS*

“I have learned more about fitting into the scientific community...how researchers interact and share information via journal articles, seminars, and lab meetings.” – *Clara Moon, Biology*

Student Feedback, cont'd

"Being involved in research helps students to think critically about the information that is conveyed to us in our daily lives, even if a career in research is not the goal."-- *Dianne Palladino, Psychology*

"I have learned not only about a specific topic area (chemotaxis), but how to manage time wisely, be patient with results, and devise my own hypotheses."
– *Erin Epperson, Biology*

Student Feedback, cont'd

“Having to write your thesis helps a student crystallize research objectives, and organize results better. The research option provides one with a great framework to write a thesis
– *Zen Mehra, ECE*

Student Perspective

Who should participate?

- Typically students complete the RO requirements in their Jr/Sr year
- 85 students completed the option or are in their final semester of requirements
- Excellent preparation for graduate school
- Framework for research

How to Participate

- Get involved in research!
- Specific timeline (see handout)
- Online intent form
- Permission from school

Research Option Schools

College of Computing

- Computational Science & Engineering
- Computer Science
- Interactive Computing

College of Engineering

- Aerospace Engineering
- Biomedical Engineering
- Chemical and Biomolecular Engineering
- Civil and Environmental Engineering
- Electrical and Computer Engineering
- Materials Science and Engineering

Ivan Allen College

- Computational Media
- Economics
- History, Technology, and Society
- Science, Technology, and Culture

College of Sciences

- Applied Physiology
- Biology
- Chemistry/Bio-Chemistry
- Earth and Atmospheric Sciences
- Mathematics
- Physics
- Psychology

Don't see your home school listed? Contact your undergraduate coordinator and our office to let them know you are interested.

Intent Form

Students at any stage of preparation should submit an online intent form at:

<http://undergradresearch.gatech.edu/intentForm/intentForm.php>

Notification goes to both UROP and the points of contact within the unit

Submit early!

Changes to the Option

- Previous 2-hour thesis writing course offered during last term of research to support thesis completion
- New requirements – two 1-hour courses:
 - LCC 4701: Undergraduate Research Proposal Writing (1-hour)
 - LCC 4702: Undergraduate Research Thesis Writing (1-hour)
- Same material, better phased with student needs

LCC 4701: Undergraduate Research Proposal Writing

- Guides students through the proposal-writing process
- Small interdisciplinary classes (15-17)
- Content includes:
 - Planning in research,
 - Literature review and databases,
 - research and documentation,
 - prose style and editing, etc.
- When to take? During 1st or 2nd semester of research
- Product = Proposal and approval from unit
- Approvals will be obtained from students around 1 month before exam week
- Online sample syllabus at:
http://undergradresearch.gatech.edu/research_option/

LCC 4702: Undergraduate Research Thesis Writing

- Guides students through the thesis-writing process
- Small interdisciplinary classes (8-12)
- Content includes:
 - Document design and organization,
 - Prose style and editing,
 - Peer review, and
 - Oral presentation,
- Pre-requisite: LCC 4701 and at least 3 hours of research
- Product = Final Thesis
- Online sample syllabus at:
http://undergradresearch.gatech.edu/research_option/

Research Proposal

- 3 main areas to include:
 - Literature review
 - Description of research problem and its importance
 - Work plan and schedule (targets)
- Written during LCC 4701
- Content should cover the entire project, not just the final semester's work

LCC 4701 registration

- Students interested should contact UROP office via email at urop@gatech.edu
- Intent form should be completed
- Students should be co-registered with UG research class
- Class day/time will be set after Phase I registration based on Phase I schedules of those registered in class

LCC 4702 registration

- Students interested should contact UROP office via email at urop@gatech.edu with following items:
 - Copy of proposal approved by school
 - Email from faculty mentor signifying student is ready to complete option
 - List of completed research courses
- LCC 4701 is pre-requisite
- Class day/time will be set after Phase I registration based on Phase I schedules of those registered in class

Unit POCs

COC

Interactive Computing - Dr. Amy Bruckman
Computer Science – Dr. Alex Orso
Computational Science and Engineering – Dr. Richard Fujimoto

COE

Aerospace Engineering – Dr. Lakshmi Sankar
Biomedical Engineering – Dr. Paul Benkeser
Chemical and Biomolecular – Dr. Pradeep Agrawal
Civil and Environmental – Dr. Don Webster
Electrical and Computer – Dr. Doug Williams
Materials Science and Engineering – Dr. Brent Carter

COS

Biology – Dr. Terry Snell
Chemistry/Biochemistry – Dr. Carrie Shepler
Earth and Atmospheric Sciences – Dr. Dana Hartley
Mathematics – Dr. Matt Baker or Dr. Doron Lubinsky
Physics – Dr. Brian Kennedy
Psychology – Dr. Greg Corso

IAC

Computational Media (co-major with Computing) – Dr. Shannon Dobranski
Economics – Dr. Usha Nair-Reichert
History, Technology, and Society – Dr. Amy D’Unger
Society, Technology, and Culture – Dr. Lisa Yaszek or Dr. J.C. Reilly

Contact Us!

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